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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, JONG SUK

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 01/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/061,861	CAMPBELL ET AL.
Examiner	Art Unit	
Jong-Suk (James) Lee	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-34 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) Claim(s) ____ is/are allowed.

6) Claim(s) 1-34 is/are rejected.

7) Claim(s) ____ is/are objected to.

8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.

 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

 1. Certified copies of the priority documents have been received.

 2. Certified copies of the priority documents have been received in Application No. ____.

 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

 a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.	6) <input type="checkbox"/> Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the
basis for the rejections under this section made in this Office action:

7 A person shall be entitled to a patent unless --
8 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or
9 on sale in this country, more than one year prior to the date of application for patent in the United States.
10

11 2. Claims 1, 2, 7, 10, 18, 19, 24 and 27 are rejected under 35 U.S.C. 102(b) as being
12 anticipated by Davies et al. (US 5,758,990).

13 Davies et al. discloses a riser tensioning device comprising of: at least one buoyancy
14 element/buoyance can (16); a frame comprising a plurality of vertical tubular members (14)
15 externally disposed to the at least one buoyancy element (16) and a plurality of connectors (24)
16 securing the vertical members to a riser stem pipe (12), the riser stem pipe secured to the riser
17 (18) by means of a cap (20), the one or more connectors (24) positioned between the top and
18 bottom of the buoyancy element (16) and comprising of radial arms as depicted in Fig. 3; on e or
19 more gas service lines (36) positioned within the frame and enter the buoyancy can (16) (see Figs.
20 1-6; col.2, lines 23-67; col.3, lines 1-53; col.4, lines 1-4).

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Claim Rejections - 35 USC § 103

2 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness
3 rejections set forth in this Office action:

4 5 6 7 8 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the
manner in which the invention was made.

9 10 11 12 13 14 15 This application currently names joint inventors. In considering patentability of the claims
under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was
commonly owned at the time any inventions covered therein were made absent any evidence to
the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor
and invention dates of each claim that was not commonly owned at the time a later invention was
made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35
U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

16 17 18 4. Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et
al. in view of Johnson (US 4,477,207). The teachings of Davies et al. have been discussed above.

19 20 21 However, Davies et al. fails to disclose or fairly suggest the buoyancy element being
syntactic foam. Johnson discloses a marine riser buoyancy assembly including a buoyancy element
(10) being made of syntactic foam (see Figs. 1-2; col.3, lines 40-64).

22 23 24 25 Therefore, in view of Johnson, it would have been obvious to one of the ordinary skill in
the art at the time the invention was made to replace the buoyancy can of Davies et al. with the
syntactic foam material in order to reduce the manufacturing cost without having associated parts
for providing the air/gas supply to the buoyancy can of Davies et al.

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1 5. Claims 4-6, 8, 9, 21-23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being
2 unpatentable over Davies et al. in view of Hampton (US 4,330,140). The teachings of Davies et
3 al. have been discussed above.

4 However, Davies et al. fails to disclose or fairly suggest the connectors having a first
5 portion located above the buoyancy element and a second portion located below the buoyancy
6 element and/or being perforated plates. Hampton discloses a marine riser connector having a first
7 and second connectors/upper and lower platform/plate (250, 276) with perforations (106), the
8 plates/platform connected between a riser (12) and service lines (38, 40) as depicted in Fig. 2 (see
9 col.7, lines 3-11, col.11, lines 25-68; col.12, lines 1-4).

10 Therefore, in view of Hampton, it would have been obvious to one of the ordinary skill in
11 the art at the time the invention was made to add or replace the connectors between the riser stem
12 pipe and tubular frame of Davies et al. with the perforated platforms/plates in order to hold the
13 auxiliary service lined through perforations while in drilling.

14
15 6. Claims 11, 12, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over
16 Davies et al. in view of Marshall (US 5,447,392). The teachings of Davies et al. have been
17 discussed above.

18 However, Davies et al. fails to disclose or fairly suggest the frame being positively or
19 neutrally buoyant in water. Marshall discloses a riser support system comprising of a riser (12A)

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1 passing through a tubular frame with a guided buoy (32) attached to the tubular frame as depicted
2 in Fig. 2 (see col.3, lines 26-57).

3 Therefore, in view of Marshall, it would have been obvious to one of the ordinary skill in
4 the art at the time the invention was made to add the guided buoy to the tubular frame of Davies
5 et al. in order to increase the angular flexure that a given tubular frame can accommodate.

6
7 7. Claims 13-15 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over
8 Davies et al. in view of Huang et al. (US 6,371,697). The teachings of Davies et al. have been
9 discussed above.

10 However, Davies et al. fails to disclose or fairly suggest at least one bracing member
11 external to the buoyancy member. Huang et al. discloses a floating vessel for drilling comprising
12 of a buoyant member (14) with diagonally or radially arched bracing members/strikes (60) as
13 depicted in Fig. 1 (see col.3, lines 1-13; col.4, lines 36-42).

14 Therefore, in view of Huang et al., it would have been obvious to one of the ordinary skill
15 in the art at the time the invention was made to add the bracing member to the tubular frame of
16 Davies et al. in order to reduce the vortex induced vibration to the buoyance member in offshore
17 structure.

18
19 8. Claims 16, 17, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

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1 Davies et al. in view of Hale et al. (US 4,422,801). The teachings of Davies et al. have been
2 discussed above.

3 However, Davies et al. fails to disclose or fairly suggest the gas service lines entering the
4 buoyancy can/element at the bottom of the can/element. Hale et al. discloses a buoyancy system
5 for underwater risers comprising of: a buoyancy element (16) having a gas service line (13)
6 entering the buoyancy member (16) at the bottom of the member as depicted in Fig. 3 (see col.5,
7 lines 45-68; col.6, lines 1-12).

8 Therefore, in view of Hale et al., it would have been obvious to one of the ordinary skill in
9 the art at the time the invention was made to locate the air/gas supply lines to the bottom of the
10 buoyancy cans in order to efficiently provide the air or gas to the buoyancy can/element.

11

12 **Conclusion**

13 9. The prior art made of record and not relied upon is considered pertinent to applicant's
14 disclosure. Other references cited disclose a composite marine riser system, a composite buoyancy
15 module and a marine structure or foundation of an offshore structure with buoyancy elements.

16 10. Any inquiry concerning this communication or earlier communications from the examiner
17 should be directed to Jong-Suk (James) Lee whose telephone number is (703) 308-6777. The
18 examiner can normally be reached between the hours of 6:30 AM to 3:00 PM Monday thru
19 Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

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1 Heather C. Shackelford, can be reached on (703) 308-2978. The fax phone number for this
2 Group is (703) 305-3597.

3 Any inquiry of a general nature or relating to the status of this application or proceeding
4 should be directed to the Group receptionist whose telephone number is (703) 308-2168.

5
6 J. Lee /jjl
7 December 30, 2002
8
9
10



**Jong-Suk (James) Lee
Patent Examiner
Art Unit 3673**